

REMARKS

As a preliminary matter, applicant has filed herewith a terminal disclaimer under 37 C.F.R. § 1.321(b) to overcome the Examiner's obviousness-type double patenting rejection. Reconsideration and further examination of the subject patent application in light of the present Amendment and Remarks is respectfully requested.

Remarks Regarding The Drawings

Applicant notes the Examiner's objection to the drawings and submits herewith corrected drawings. No new matter has been added.

Remarks Regarding The Specification

The Abstract specification has been amended to remove reference to the figure. No new matter has been added.

Introductory Remarks Regarding The Claims

Original claims 1-7 were pending in the application and have replaced by new claims 8-12. Applicant's arguments below will address the rejection, for example, of independent claim 1, by citing the changes to corresponding new independent claim 8.

Rejection Under 35 U.S.C. §102

Claims 1-4 and 7 stand rejected under 35 U.S.C. §102(b) as being anticipated by Kawahata, as set forth in paragraphs 4-5 of the Office Action. In view of the claims as presently amended, applicant respectfully traverses this rejection. Applicant includes below "reference drawings 1-4" to aid in the understanding of the arguments presented.

As shown in FIG. 10A of the specification as filed, the antenna element is shown mounted on a substantially central position of arbitrary selected side of the antenna mounting printed-circuit

board. Reference drawing #1 below shows a side view of the printed-circuit board with the current distribution. In that regard, the current distribution on the side exhibits a dipole mode radiation pattern irrespective of the length of the side. Additionally, the ground operates as a reflector by surrounding at least three sides of the antenna element with the ground, and as shown in Fig. 7 of the specification, and the directivity in one direction is substantively perpendicular to the side of the printed-circuit board.

Like the cited reference to Kawahata, if the antenna element is disposed at the corner of the printed-circuit board, as illustrated in reference drawing #2, a current distribution is in the atypical dipole state. Further, as particularly highlighted in reference drawing #3, if a board length is longer than $\lambda/2$, the directivity would split into four directions, and the ground would not adequately operate as a reflector. Accordingly, such a antenna arrangement would not have a strong directivity in a specific direction.

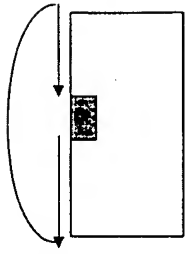
The current distribution of applicant's claimed invention, as shown in reference drawing #4, is very similar to the current distribution of a triangle loop antenna, which is very desirable. In the prior art and in current practice, only the triangle loop antenna has been able to achieve the current distribution of reference drawing #4. However, in that regard, the present invention achieves such a current distribution without use of a triangle antenna by using the claimed antenna formed in a thin plate-like shape having a rectangular horizontal cross section, where the antenna element is mounted on a substantially central position of an arbitrarily selected side of the antenna mounting printed-circuit board.

Further as shown in the "OK zone" of reference drawing #5, it is noted that the substantially central position of an arbitrarily selected side of the antenna mounting printed-circuit board can be

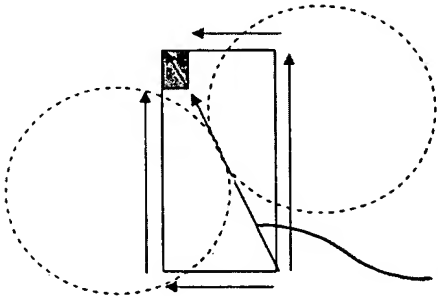
placed around middle two sections where the side in which the antenna element is disposed is divided into quarters. Such structure or function is not taught or disclosed in the cited reference to Kawahata. Kawahata does not teach or disclose a chip-like antenna element formed into a thin plate shape having a rectangular horizontal cross section . . . wherein the antenna element is mounted on a substantially central position of an arbitrarily selected side of the antenna mounting printed-circuit board. Such an element is completely missing in Kawahata. Because at least one significant element of applicant's claimed invention is missing in from the device in Kawahata, Kawahata cannot anticipate applicant's claimed invention. Accordingly, applicant asserts that new independent claim 8 (similar to original claim 1) is allowable over Kawahata and that dependent claims 9-12 are allowable as depending from an allowable base claim.

Applicant respectfully notes that anticipation focuses on whether a claim reads on the product or process that a prior art reference discloses, not on what the reference broadly "teaches." Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 281 U.S.P.Q. 781 (Fed. Cir. 1983). As the Examiner is aware, each and every element of a claim must be shown in the "four corners" of the reference. "To anticipate a claim, a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter." PPG Industries v. Guardian Industries, 75 F.3d 1558, 37 U.S. P. Q.2d 1618 (Fed. Cir. 1996).

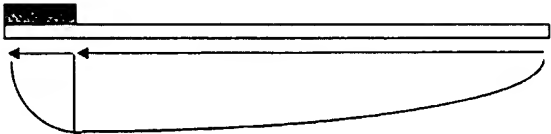
Reference Drawing 1



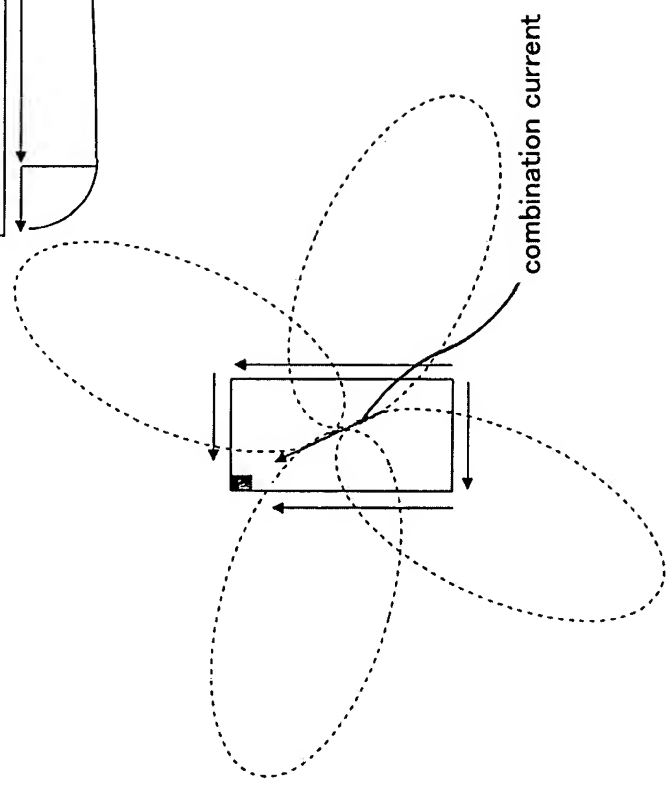
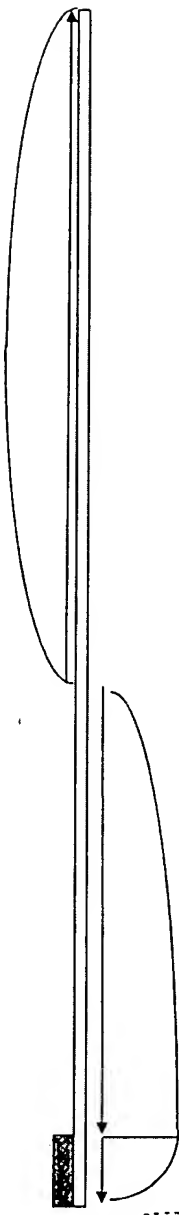
Reference Drawing 2



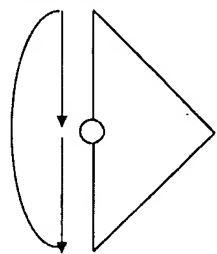
combination current



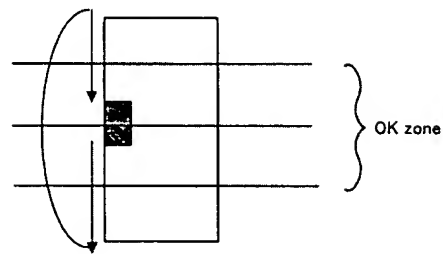
Reference Drawing 3



Reference Drawing 4



Reference Drawing 5



Closing Remarks

For the foregoing reasons, applicant submits that the subject application is in condition for allowance and earnestly solicits an early Notice of Allowance. Should the Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, the Examiner is respectfully requested to call the undersigned at the below-listed number.

The Commissioner is hereby authorized to charge any additional fee which may be required for this application under 37 C.F.R. §§ 1.16-1.18, including but not limited to the issue fee, or credit any overpayment, to Deposit Account No. 23-0920. Should no proper amount be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 23-0920.

Respectfully submitted,

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By



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IN THE DRAWINGS:

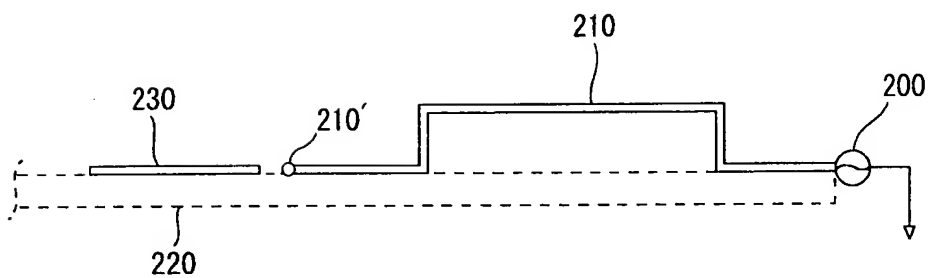
Please amend the drawings in accordance with the replacement sheets attached hereto.

Pursuant to 37 C.F.R. 1.121(d) two sets of drawings are included. The first set shows a clean copy of the drawings with all changes incorporated, while the second set shows the changes marked up in red. The clean copy of the drawings has been labeled as "Replacement Sheets."



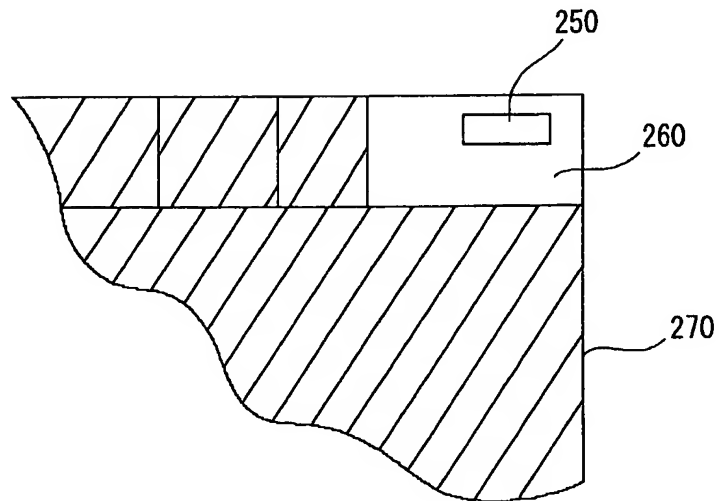
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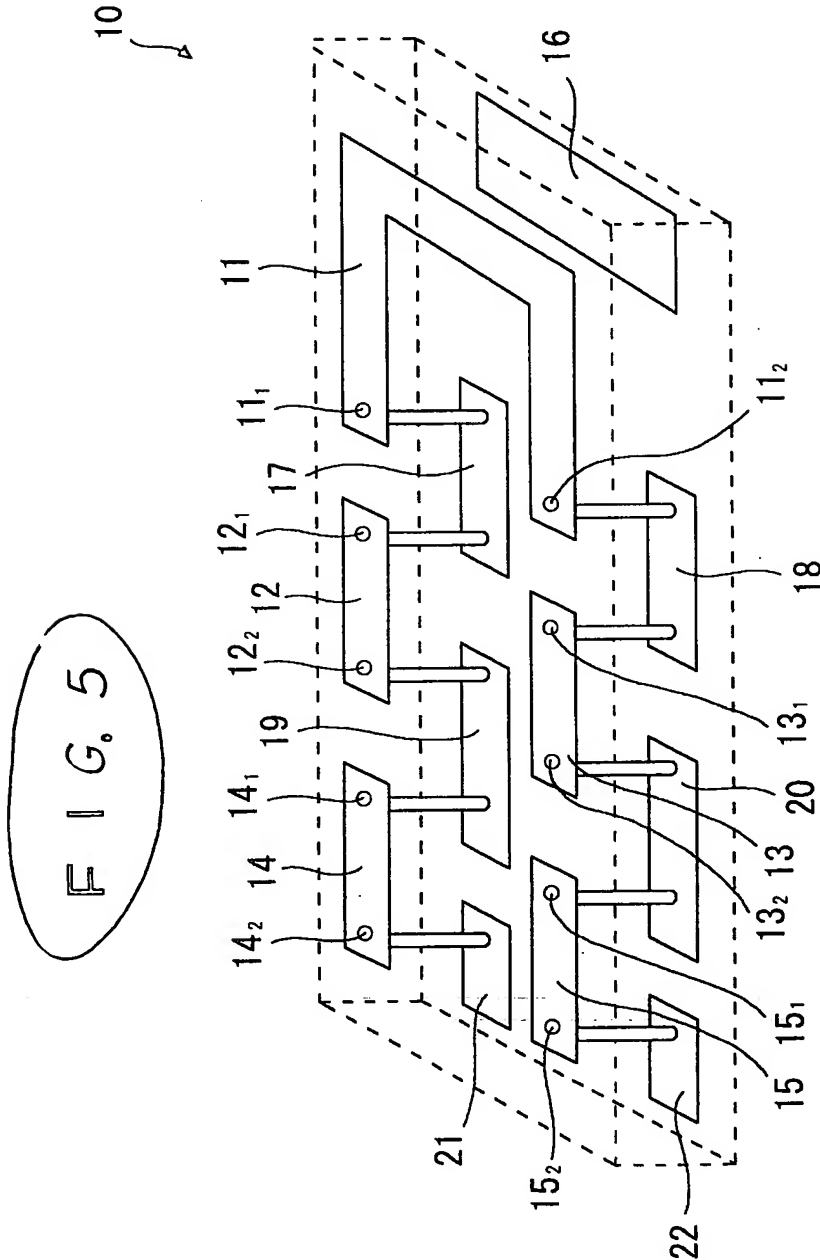
FIG. 1 *PRIOR ART*



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FIG. 2 *PRIOR ART*





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FIG. 8 *PRIOR ART*

